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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

Appl. No. : 10/694,645 Confirmation No. 4007
Appellant : Timothy M. Morris et al.
Filed : October 27, 2003
TC/A.U. : 3644
Examiner : Tien Quang Dinh

Docket No. : 03-634
Customer No. : 50791

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313

REPLY BRIEF

Sir:

This is in reply to the Examiner's Answer mailed December 6, 2007, which set a shortened statutory period of two (2) months which expires on February 6, 2008.

Remarks/Arguments begin on page 2 of this paper.

REMARKS/ARGUMENTS*Response to Examiner's Argument*

On page 3 of the Examiner's Answer, the Examiner states that Shafer et al. teaches that FADECS (which has feedback loops) are well known in the art to monitor and control elements in an engine system. The Examiner then presents the conclusory statement that it would have been obvious at the time the invention was made to have used FADECs in Wojciehowski et al.'s system to safely and efficiently generate power to operate the aircraft equipments. Nowhere in the rejection does the Examiner point out where either of the references teaches or suggests "means for monitoring at least one parameter which provides information about an incipient change in power demand" and/or "means for supplying bleed air from said engine during a transient state in response to said at least one monitored parameter." There is absolutely nothing in the rejection which would indicate where either of these limitations can be found in any of the cited and applied references. Nor is there any line of technical reasoning behind this rejection. Thus, the Examiner has failed to meet his burden of making a *prima facie* case of obviousness.

With respect to claim 32, the Examiner states that it should be noted that due to the pneumatically operated means, there are inherent increases to an amount of stall margin available to a high

pressure compressor of the engine. There is no extrinsic evidence which supports this statement. Thus, the Examiner has not met his burden of establishing a case of inherency.

On pages 4 - 6 of the Examiner's Answer, the Examiner sets forth his response to the arguments presented by Appellants in their brief. As noted above, Appellants believe that the Examiner still has not made out a *prima facie* case of obviousness.

The Examiner on page 4 of the Examiner's Answer mischaracterizes the limitations of claim 20. The Examiner says that the claim calls for "means for monitoring incipient change in power demand." This is wrong. The claim in fact calls for a means for monitoring *at least one parameter which provides information about an incipient change in power demand*. Still further, the claim calls for "means for supplying bleed air from said engine during a *transient state* in response to said *at least one monitored parameter*." Not only is Wojciehowski et al. silent on the monitoring means, there is no disclosure in this patent of supplying bleed air in response to the *at least one monitored parameter* during a transient state.

The Examiner admits that Schafer et al. was brought in solely to show a monitoring means. Even if it were obvious to modify Wojciehowski et al. to include Schafer et al.'s monitoring means, there still is nothing which teaches or suggests the claimed "means for supplying bleed air from said engine during a *transient state* in

response to said *at least one monitored parameter*." This aspect of the claimed invention is not discussed at all by the Examiner.

Thus, even if the references were combined in the manner suggested by the Examiner, there would not be any teaching of all the claimed elements in claim 20. It should also be noted that neither cited and applied reference is concerned with the problem addressed by Appellants - namely providing a system which simultaneously allows for reduced mechanical shaft power load and systems capacity to absorb and utilize the energy of compressor bleed air at low power and wherein engine pneumatic power can be used to provide power for operating accessories onboard an aircraft, while improving the gas turbine compressor operating lien margin from the compressor surge line. Since neither reference recognizes the problem(s) which are solved by Appellants' claimed invention, neither reference could possibly render the claimed invention obvious.

In response to Appellant's argument that the Examiner has never provided any reason or explanation as to why Wojciehowski et al. would be motivated to have the claimed monitoring means and/or the claimed bleed air supplying means and/or how the inclusion of such means would improve the operation of Wojciehowski et al.'s system, the Examiner offers the following:

"In addition, since Wojciehowski et al. is an analog system that is without electronics, it is motivation to have used the FADEC system as taught by Schafer et al. to allow

optimal control of the whole system. Electronic means that are used to improve analog systems are very well known in this day and age. See automobiles, aircrafts, etc."

Appellants submit that this is not a proper motivational statement. The fact of the matter is that a FADEC such as Schafer et al.'s would not allow optimal control of the whole system. The Wojciehowski et al. patent is directed to an aircraft spraying system that has a control system for regulating the pressure of bleed air flow to the motor to vary the rate of liquid distributed from the aircraft. As noted in Appellants' Appeal Brief, in order to operate this system, there is no need for the claimed monitoring means and/or the claimed means for supplying bleed air. In other words, there is absolutely no reason or need to provide Wojciehowski et al.'s system with either of the claimed means because they serve no useful purpose or benefit in the Wojciehowski et al. liquid spraying system.

As for the FADEC system in Schafer et al., a FADEC would serve absolutely no purpose with regard to the operation of the liquid spraying system. Certainly, Schafer et al. does not indicate that it would improve the liquid spraying system. The aforementioned statement by the Examiner is insufficient to make out a *prima facie* case of obviousness because it provides no technical reasoning as to how Schafer et al.'s FADEC could be used to improve the liquid spraying system in Wojciehowski et al. At best, all the Examiner

has done is found a claimed element in the prior art. That is insufficient to establish a *prima facie* case of obviousness. See *In re Rouffet*, 149 F.3d 1350, 1355, 47 USPQ2d 1453, 1457 - 58 (Fed. Cir. 1988).

The Examiner fails to recognize that a FADEC controls engine power level which in the case of a turbofan engine is thrust and in the case of a propeller driven aircraft is shaft horsepower to the propeller. The power demand referred to in the instant application is electrical power required by the aircraft. The engine mounted generators produce this and have no connection to the FADEC. The airplane electrical system demands power and the generator control units ensure it is provided. There is no connection too either the airplane's thrust levers or the engine control system.

With regard to the Examiner's comments on page 5 about switch 86 and element 76, the switch 86 is moved to a start position to energize a solenoid 68 and open a shutoff valve 64 to develop pressure within a chamber 54. The switch 86 provides absolutely no information about any incipient change in power demand. It does not even have any sort of feedback loop to a controller. As for element 76, it is an actuator used to adjust the pressure maintained in the chamber 54. It is not used in response to any incipient change in power demand and during a transient state. Certainly, the Examiner can not support to any statement in Wojciehowski et al. which would support such an interpretation. The Examiner's statement that a

FADEC system in Wojciehowski et al.'s system would allow the whole system to be monitored is not true. Nor does it flow from any teaching in any of the cited and applied references. The FADEC in Shafer et al. has nothing to do with optimizing the use of any bleed air from an engine to any pneumatic device.

With regard to the Examiner's comments about claims 21 - 25 and 32, the Examiner does not even address the arguments set forth in Appellants' Brief. These claims are allowable for the reasons set forth in Appellants' Brief. The Examiner's statement that use of FADECs in Wojciehowski et al.'s system would lead to the opening or modulation by signals from the FADEC is not anything which flows from any of the cited and applied references. In fact, the statement is non-sensical. With regard to claim 25, the FADEC system as taught by Shafer et al. has no feedback loop for transmitting a signal to the electronic engine control device representative of control valve position. As to claim 32, the pneumatically operated means in Wojciehowski et al. does not increase the stall margin available to the engine compressor. All that happens in Wojciehowski et al. is that the bleed air from the engine is either supplied or not supplied to the pneumatic motor. This has no effect on the stall margin of the engine.

As for the Examiner's comments about claims 26, 27, 30, and 31, the Examiner has still not set forth any statement as to what would motivate one of ordinary skill in the art to incorporate the

features set forth in the claims into the Wojciehowski et al. system. Certainly, the Wojciehowski et al. system does not require a single one of the claimed elements to operate. Nor do the claimed elements increase Wojciehowski et al.'s ability to spray liquid. These claims are allowable for the reasons set forth in Appellants' Brief.

CONCLUSION

For the above reasons, as well as the reasons set forth in Appellants' Brief, the Board should reverse the rejections of claims 20 - 32 and remand the case to the Primary Examiner for allowance and issuance.

FEES

No fee is believed to be due as a result of this response.
Should the Director determine that a fee is due, he is hereby
authorized to charge said fee to Deposit Account No. 02-0184.

Respectfully submitted,

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IN TRIPLICATE

Date: February 6, 2008

I, Karen Gill, hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313" on February 6, 2008.

